DLA-94-P40034

UPDATE TO CONTRACTING COST FACTORS USED IN THE CONTRACT TERMINATION MODEL

JULY 1994

FOR

DEPARTMENT OF DEFENSE
DEFENSE LOGISTICS AGENCY
Executive Director (Procurement)
CAMERON STATION
ALEXANDRIA, VA 22304-6100

INSIGHT THROUGH ANALYSIS

DORO

DLA-94-P40034

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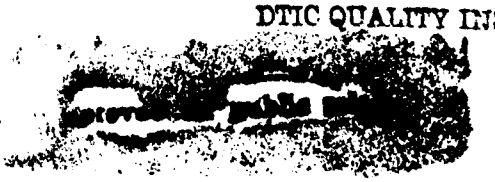

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IN REPLY
REFER TO

FOREWORD

This is a study to update and revise the cost factors contained in the Cost Data File of the Contract Termination Model (CTM). The CTM is used by DLA Supply Centers to evaluate whether existing contractual actions are still cost effective. The validity of the Contract Termination Model is dependent on accurate inventory, reprocurement, and termination cost data.

Many changes impacting procurement costs have occurred since these cost factors were developed in 1989. Additionally, unit cost data are now available to better estimate contract termination costs. Therefore, the cost factors contained in the Cost Data File of the CTM were reevaluated to maintain the validity of the model.

I wish to thank Mike Yeatts, Mary Lou Taylor, and Don Petersen of the DLA Performance Standards Support Office and Linda Dove of the Office of the Comptroller for their support in providing information necessary to perform this study.

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EXECUTIVE SUMMARY

This is a study to update and revise the cost factors contained in the Cost Data File of the Contract Termination Model (CTM). The CTM is used by DLA Supply Center to evaluate whether existing contractual actions are still cost effective. The validity of the Contract Termination Model is dependent on accurate inventory, reprocurement, and termination cost data.

Many changes impacting procurement costs have occurred since these cost factors were developed in 1989. Two of these changes include the consolidation of payment functions to the Defense Finance Accounting Service (DFAS) and the implementation of DLA Pre-award Contracting System. Additionally, unit cost data are now available to better estimate contract termination costs. Therefore, the cost factors contained in the Cost Data File of the CTM were reevaluated to maintain the validity of the model.

The cost factors of the Cost Data File are broken down into three areas. These are the cost to hold, the cost to order, and the cost to terminate. The findings for each area are: (1) The only component of the cost to hold which changed is the interest rate. It was reduced from 10 percent to 2.3 percent. This is a much lower rate than has been used by the government in the past; however, this rate is mandated by current policy. (2) Changes in the cost to order by center and contract type ranged from -24.07 percent to 59.30 percent. The increases associated with the cost to order are attributed to three factors. These are transfer of the payment function to DFAS, the availability of better cost estimating data for Defense Contract Management Command functions, and an increase in wages. (3) The estimated cost to terminate a large purchase request (PR) dropped significantly and the estimated cost to terminate a large contract rose significantly. These changes reflect an improved methodology for

estimating costs rather than cost changes in the process of terminating contracts.

We recommend that the Cost Data File of the CTM be replaced by each center to reflect the appropriate cost factors as given in the report to ensure the validity of the CTM. We also recommend updates to the Cost Data File according to the following guidelines: (1) The cost to order and the interest rate should be updated on a yearly basis, and (2) all the costs should be reevaluated if DLA makes major changes to the way they procure materiel or every 5 years, whichever comes first. Finally, we recommend the Contract Termination Model be modified to consider the contract administration type when considering terminating a small contract.

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SECTION 1
INTRODUCTION

The Defense Logistics Agency (DLA) Operations Research Office (DORO) was tasked by the DLA Acquisition Support Team (AQPL) to update the cost factors used by the Contract Termination Model (CTM). The cost factors updated include the storage, obsolescence, interest, termination and reprocurement contracting costs used in the CTM.

1.1 BACKGROUND

DORO developed the Contract Termination Model to help DLA Supply Centers evaluate whether existing contractual actions are still cost effective. The model compares the costs associated with the decision to terminate a contract and reprocure the materiel at a latter date with the costs to receive, store and hold the excess inventory. The validity of the Contract Termination Model is dependent on accurate cost data. The reprocurement cost factors currently used were taken from a previous study performed in 1989.[1] Many changes impacting procurement costs have occurred since these cost factors were developed. These changes involve some of the contracting and contract management processes and increases in the labor costs associated with the contract process. Additionally, unit cost data are now available to better estimate contract termination costs and new policy guidance affecting interest rates impact the cost to hold. Therefore, the termination and reprocurement contracting costs used in the Contract Termination Model need to be reevaluated to maintain the validity of the model.

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[1] Simms, Dr. Robert, et al. Final Report Multiple Cost EOQ Study, Synergy, Inc., December, 1989.

1.2 SCOPE

(1) This effort covers the termination and reprocurement contracting and supply management costs used in the Contract Termination Model from the following centers: Defense Construction Supply Center (DCSC), Defense Electronic Supply Center (DESC), Defense General Supply Center (DGSC), Defense Industrial Supply Center (DISC), Defense Personnel Support Center Medical (DPSC Medical) and DPSC Clothing and Textile (DPSC (C&T)).

(2) This effort evaluates the initial award and the final award reprocurement contracting costs for Standard Automated Materiel Management System (SAMMS) Automated Small Purchase System (SASPS) I contracts, SASPS II contracts, Inventory Control Point (ICP) administered small manual contracts, and Defense Contract Management Command (DCMC) administered small manual contracts, and large contracts.

(3) This effort examines the termination costs for a small purchase request (PR), large PR, small contract and large contract.

(4) This effort reevaluates the storage, obsolescence and interest costs contained in the Cost Data File of the Contract Termination Model.

1.3 OBJECTIVE

To ensure the storage, obsolescence, interest, termination and reprocurement contract cost factors used in the Contract Termination Model accurately reflect system costs.

1.4 ASSUMPTIONS

(1) The standards approach methodology to determine reprocurement costs is the preferred method for determining costs incurred at the supply centers and depots. Unit cost data or activity based cost data are not currently available at those locations in the detail necessary for the estimates.

(2) In the absence of time standards for a given ICP, the time standard is assumed to be the average of the other ICPs.

(3) The average grades for individuals involved in the various processes evaluated have not changed.[2]

(4) DLA contracts administered by Defense Contract Management Command (DCMC) typically reside at the Defense Contract Management Area of Operation (DCMAO) level; therefore, the unit cost data for DCMAO most accurately reflects DLA's cost of contracts administered by DCMC.

1.5 LIMITATIONS

The use of a standards approach reveals the time it should take to perform a task. Because individual performance levels vary, the time it actually takes to perform a task may also vary.

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[2] Simms, et al. Ibid.

SECTION 2
METHODOLOGY

The CTM contains a file called the Cost Data File (usrtp100.txt). This file resides on the Distributed Minicomputer System and is maintained by each of the supply centers. The costs in this file can be categorized into three areas. These are: (1) the cost to hold, (2) the cost to order, and (3) the cost to terminate.

2.1 COST TO HOLD

The cost to hold is comprised of the interest rate, the storage rate, and the obsolescence rate.

2.1.1 INTEREST RATE

The interest rate previously used by the CTM was 10 percent; however, Office of Management and Budget guidance mandates using the interest rate in the President's budget submission to Congress for Treasury Notes and Bonds having a maturity similar to the duration that the inventory to be purchased will be held.[3] A similar study indicates it is reasonable to assume a 5-year hold time, and thus a 5-year maturity rate.[4] In addition, Corporate Strategic Programming (CAIC) states real interest rates (rather than nominal interest rates) should be used. On this basis, the appropriate interest rate for all centers is 2.3 percent.

2.1.2 STORAGE RATE

The storage rate previously used by the CTM was 1 percent. DoD Instruction 4140.39 suggests use of a 1 percent storage rate.

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[3] 1994 Discount Rates for OMB Circular No. A-94, OMB, February 10, 1994.

[4] Gould, Burnham. The Cost of Late Delivery for Post Award Consideration, DORO, May, 1994.

DLA depot operations personnel have occasionally reevaluated the use of this rate and concluded that it is reasonable. A recent study of storage costs at five large DLA depots concluded "the true storage cost percentage was between 0.9 percent and 1.3 percent" and "continued use of 1 percent seems reasonable".[5] Therefore, the previous storage rate of 1 percent remains valid.

2.1.3 OBSOLESCENCE RATE

The following obsolescence rates were originally used by the CTM: DCSC, 6 percent; DESC, 8 percent; DGSC, 6 percent; DISC, 7 percent; DPSC (Medical), 1 percent; and DPSC (C&T), 7 percent. These rates were calculated by dividing the dollar value of inventory sent to disposal by the dollar value of the on-hand inventory as per DoD Instruction 4140.39. These rates were developed by the centers with the exception of DISC and DPSC (C&T). Their rates were assumed to be the average of the other three hardware centers. A recent study indicates no change in the obsolescence rates.[6] Therefore, the previous obsolescence rates used by the CTM are still valid.

2.2 COST TO ORDER

The cost to order is broken down into the initial award and the final award cost for five different procurement types. The five procurement types are SASPS I contracts, SASPS II contracts, small ICP administered contracts, small DCMC administered contracts, and large contracts. These costs were derived from the study performed in 1989.[7] In order to derive the initial award and final award costs used in the CTM, it was necessary to

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[5] Cost-To-Hold Methodology, Synergy, Inc., 31 August 1992, revised 22 February 1993, page D-3.

[6] Ibid, pages 2-3 and 4-10.

[7] Simms, et al. Ibid.

update and reevaluate the costs from the Synergy Study. These costs were reevaluated if there was a significant change in the procurement process or if better cost estimating data are now available. Otherwise, these costs were updated with Synergy's formulation using 1994 wages, including the appropriate locality pay for each center and the most recent available time standards for each activity. (NOTE: DPSSO is currently creating and updating standards for the depots DLA acquired in 1992. As a result, new standards are not available for Depot receiving functions. Therefore, these costs are updated for wages only.)

There are three areas where the cost to order was reevaluated. Two changes have occurred which drastically impact the way DLA procures materiel since the original study was performed. These are: (1) the implementation of the DLA Pre-Award Contracting System (DPACS), and (2) the movement of payment functions from DLA to the Defense Finance and Accounting Service (DFAS). In addition, better estimates are now available for the costs for functions performed by DCMC and consequently the methodology for estimating these costs differ from the Synergy Study.

2.2.1 IMPLEMENTATION OF DPACS

DPACS is a paperless system for handling pre-award actions. The implementation of DPACS affects the Solicitation, and Evaluation and Award areas of procurement for small manual and large contracts. No unit cost or activity based costing data are available to estimate the costs of these functions. However, new time standards, which are inclusive of the DPACS system, are available for small manual contracts for these two areas at DISC and DGSC.

Time standards were derived for small manual Solicitation (Standard 1310) and for Evaluation and Award (Standard 1320) for

the other centers by: (1) subtracting the new time standard from the old standard, exclusive of DPACS, for Standard 1310 and 1320 for DGSC and DISC, (2) calculating the average difference associated with DPACS for the two centers, and (3) subtracting the average difference for DGSC and DISC from the new time standards, exclusive of DPACS, for the other centers.

New time standards inclusive of DPACS are not available for large manual Solicitation (Standard 1210) and Evaluation and Award (Standard 1240). However, new time standards exclusive of DPACS are available. An adjustment was made to these standards for DPACS by: (1) subtracting the average difference for Standard 1310, as calculated in the previous paragraph, from Standard 1210, and (2) subtracting the average difference for Standard 1320, as calculated in the previous paragraph, from Standard 1240.

(Note: The new times for Standard 1240, Evaluation and Award, increased at all centers from the times used in the initial study. The main reasons for the increase are an increase in the number of negotiated proposals and an increase in the number of contracts requiring legal/high dollar review.)

Other than developing the new times for Solicitation and Evaluation and Award, the formulation for the costs for these two areas is the same as the formulation previously used.

2.2.2 DFAS PAYMENTS

As a result of the consolidation of the payment function to DFAS, all payments on DLA contracts are now made by DFAS, with the exception of Standard Automated Materiel Management System (SAMMS) payments for DISC, DPSC (C&T), and DPSC (Medical). DFAS charges DLA a set fee of $22.72 for SAMMS payments and $69.25 for

Mechanization of Contract Administration Services (MOCAS) payments. It was assumed that SASPS I, SASPS II, and small ICP administered contracts are SAMMS payments and that small DCMC administered contracts and large manual contracts are MOCAS payments.

Time standards for payment functions for DISC, DPSC (C&T), and DPSC (Medical) have not been updated since these costs were originally calculated. Therefore, the SAMMS payments for DISC, DPSC (C&T), and DPSC (Medical) were updated from the original estimates for wage changes only.

(Note: When DLA makes its own payments, the Labor Benefits cost must be calculated for this function. However, when DFAS makes the payment, labor benefits are not calculated for this function since they are included in the set fee.)

2.2.3 DCMC FUNCTIONS

The functions performed by DCMC for DLA are pre-award survey, core contract management and quality assurance (QA), source inspection, and contract progress payments. The previous estimates for these functions performed by DCMC on DLA contracts were derived from an unpublished DLA Policy and Plans, Operations Research Office study performed in 1985.[8] Since the original costs for these functions were derived, DCMC has developed unit cost data for 18 different functions or activities. Six of these activities are directly related to the four functions DCMC performs on DLA contracts. These are: (1) pre-award survey, (2) core contract administration, (3) quality assurance, (4) mandatory QA inspections, (5) source inspection, and (6)

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[8] "Draft Report. Development of DCAS Variable Cost to Order for DoD Instruction", DLA-LO, August, 1985.

progress payments. Most DLA contracts are administered at the DCMAO level; therefore, the FY 93 DCMAO direct labor unit cost data was used for these six areas. The cost per contract for DCMC functions was calculated by: (1) calculating the unit cost of an activity by dividing the FY 93 direct labor cost associated with an activity by the number of units processed, (2) calculating the percent of contracts requiring an activity by dividing the number of DCMC activity units by the total number of contracts administered by DCMC, and (3) multiplying the percent of contracts requiring an activity by the unit cost of the activity. The direct labor unit costs per contract are listed in Table 2-1.

Table 2-1. DCMC UNIT COST

FUNCTION	ACTIVITY	DIRECT COST	# OF UNITS	UNIT COST	PERCENT OF CONTRACTS	COST / CONTRACT
Pre-award Survey		5,111,484	6,164	$829.25	2.1%	$17.77
Contract Administration & Quality Assurance	Core Contract Admin.	$52,261,535.00	287,674	$181.67	100.0%	$181.67
	Quality Assurance	$158,987,624.00	278,767	$570.32	96.9%	$552.67
	Mandatory QA Inspection Requirements	$10,779,030.00	12,257	$879.42	4.3%	$37.47
Source Inspection		$27,376,553.00	264,891	$103.35	92.1%	$95.17
Payment		$1,968,741.00	29,115	$67.62	10.1%	$6.84

DLA contracts need fewer pre-award surveys and require less contract administration than the typical DCMC administered contract. Consequently, the DCMC cost per contract for a pre-award survey was weighted by the probability of DCMC administering a DLA contract. These probabilities are listed in Table 2-2.

Table 2-2. Probability of a Pre-Award Survey

Contract Type	DCSC	DESC	DGSC	DISC	DPSCC&T	DPSCMED
Small Manual	0.213	0.248	0.129	0.476	0.022	0.017
Large Manual	0.994	0.995	0.996	0.998	0.771	0.965

The cost of core administration on a large contract was also weighted by the probability of DCMC administering a large DLA contract (See Table 2-2.). The cost of core administration of a small manual DCMC administered contract was weighted by the proportion of the cost on a small contract to a large contract taken from the initial study.[9] This lead to a weighting factor of .77 for a small manual DCMC administered contract.

(Note: The original costs for DCMC activities contained Labor Benefit Costs, and thus Labor Benefit Costs were not calculated on these activities in their study. Due to the change of the methodology from their study, Labor Benefit costs now must include DCMC activities.)

2.2.4 INITIAL AND FINAL AWARD COSTS

Once the procurement costs were revised, the initial and final award costs were recalculated using the original methodology in the CTM Study.[10]

2.3 COST TO TERMINATE

The cost to terminate includes the administrative cost to terminate a small purchase request (PR), a large PR, a small

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[9] Simms, page 112. Ibid.

[10] Brooks, Thomas L., IV et al. Termination for Convenience Decision Support Model, DORO, September 1990, page 11.

contract, and a large contract. This cost does not include the termination fee paid to the contractor.

2.3.1 COST TO TERMINATE A SMALL PR

The cost to terminate a small PR was assumed to be $10.00 in the original CTM study. Discussions with center and HQ personnel confirmed that this cost value still is nominal. Based on these discussions, the administrative cost to terminate a small PR was merely updated based on the updated Cost To Order activities (i.e. direct labor, leave entitlements, and fringe benefits for processing an ICP administered small purchase request to Procurement) in section 2.2.

2.3.2 COST TO TERMINATE A LARGE PR

The cost to terminate a large PR was previously estimated to be twice the cost to award a large purchase contract or approximately $270. Discussions with center and HQ personnel disclosed the belief that this figure was much too high.

Cancellation costs would depend on how far the processing of the PR had proceeded. Since there is no agreement with a contractor, the cancellation costs normally are small. Therefore, the cost to terminate a large PR was assumed to be equivalent to the cost to process a large PR to Procurement plus the cost of a technical referral and recording and processing in Procurement.

2.3.3 COST TO TERMINATE A SMALL CONTRACT

The cost to terminate a small contract previously was estimated to be $300. This figure was based on a number used in the Federal Acquisition Regulations (FAR) in a different context.

When considering the cost to order, the CTM distinguishes between small ICP administered contracts and DCMC administered contracts.

However, when evaluating termination costs on small contracts it does not distinguish between these two contract administration types. Because of original estimates on the cost to terminate a small contract, at the time the model was built, it was assumed the termination costs on these two contract types were the same.

The cost to terminate a small ICP contract is estimated to be equivalent to the cost to order of a small ICP contract minus the DFAS payment cost based on discussions with Center Procurement personnel and Headquarters (HQ) Acquisition personnel. This is based upon the assumption that the contract is administered by the supply center, rather than by DCMC.

Less than 22 percent of DLA small contracts are administered by DCMC. The available DCMC unit cost data does not distinguish between contract type. The DCMAO unit cost is $1427. Given the large difference in the cost to terminate contracts based upon where they are administered, the CTM should be modified to differentiate between contract administrators. HQ staff believes that, given that most small contract terminations are ICP administered, the value of an ICP small contract termination should be used as the cost to terminate a small contract until this shortcoming of the CTM can be modified.

2.3.4 COST TO TERMINATE A LARGE CONTRACT

The cost to terminate a large contract previously was estimated at $1375 based on the data available at the time. This figure represented the sum of: (1) $300, based from a value used in the FAR in a different context, and (2) $1075, representing the cost of a pre-award survey taken from a 1985 study.

Most DLA large contracts (over 96 percent) are administered by DCMC and therefore, the bulk of the termination process is also

performed by DCMC. DCMC now has unit cost data available to estimate the administrative cost to terminate. The total average FY 93 DCMC unit cost for this function is $3257. (This cost includes direct labor costs, labor benefit costs, indirect costs, and overhead costs.) No breakout of contract ownership or contract type is available in the unit cost data to estimate the administrative cost to terminate a large DLA contract. However, based on the assumption that most DLA contracts reside at the DCMAO level, DCMAO unit cost data for termination is a more appropriate estimate of this cost. In addition, only the direct unit cost should be used because the indirect and overhead costs are mostly fixed costs rather than variable costs.

Some concern exists about the level of effort to terminate a DLA contract versus other DCMC contracts. DCMC termination experts stated that DLA contracts require the same level of effort to terminate as do service contracts. In some ways DLA contracts may actually require more effort because DLA imposes more requirements to terminate a contract than do the services. Therefore, the DCMAO direct unit cost data seems to be a more reasonable estimator of the administrative cost to terminate a large contract than the previous methodology. The DCMAO direct unit cost to terminate is $1427 and the average time spent to terminate a contract is 48 hours. This translates to an hourly rate of $29.73.

DLA must also perform some functions in terminating a contract administered and terminated by DCMC. This activity is relatively small compared to DCMC, but an allowance must also be added to the DCMC unit cost for termination costs incurred at the supply center. This cost was assumed to be equivalent to the cost to order in Procurement for a large contract.

No cost data exists on the administrative cost to terminate a large contract administered at an ICP. Since this is a small percentage of the large contracts and in the absence of data, we assume the administrative cost to terminate a large DLA contract administered by an ICP is equivalent to the cost to terminate a large contract administered by DCMC. The previous methodology assumed this cost is equivalent to the cost for DCMC to perform a pre-awa survey.

SECTION 3

FINDINGS

3.1 FINDINGS

The new cost factors for the CTM cost data file are summarized in Table 3-1. A discussion of the significant changes to each area follows.

Table 3-1. CTM Cost Data File Rates

	DCSC	DESC	DGSC	DISC	DPSCC&T	DPSCMED
Cost To Hold						
Interest Rate	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%
Storage Rate	1%	1%	1%	1%	1%	1%
Obsolescence Rate	6%	8%	6%	7%	7%	1%
Cost To Order						
SASPS 1 Initial Award Cost	$29.18	$28.65	$24.60	$33.70	n/a	n/a
SASPS 2 Initial Award Cost	$45.31	$43.09	$44.16	$59.56	n/a	n/a
Small ICP Initial Award Cost	$64.20	$66.61	$58.46	$69.46	$80.91	$54.18
Small DCMC Initial Award Cost	$386.04	$388.28	$380.29	$391.92	$394.23	$308.49
Large Contract Initial Award Cost	$601.28	$604.33	$618.39	$656.78	$727.30	$519.31
SASPS 1 Final Award Cost	$48.42	$47.64	$44.06	$33.95	n/a	n/a
SASPS 2 Final Award Cost	$54.61	$53.32	$51.42	$43.13	n/a	n/a
Small ICP Final Award Cost	$65.35	$63.85	$59.64	$50.42	$135.49	$45.59
Small DCMC Final Award Cost	$849.86	$848.51	$844.99	$856.58	$908.03	$714.59
Large Contract Final Award Cost	$1,083.94	$1,089.83	$1,091.55	$1,119.69	$1,178.53	$917.23
Cost To Terminate						
Small PR Termination Cost	$18.88	$16.97	$15.48	$21.13	$22.80	$19.49
Large PR Termination Cost	$48.03	$42.26	$54.48	$57.67	$56.51	$47.27
Small Contract Termination Cost	$106.83	$107.74	$95.38	$116.71	$192.95	$96.59
Large Contract Termination Cost	$1609.44	$1,611.43	$1,631.68	$1,667.20	$1,771.36	$1,621.61

3.1.1 COST TO HOLD

The only cost to hold rate which changed was the interest rate. It was reduced from 10 percent to 2.3 percent. This is a much lower rate than has been used by the government in the past; however, this rate is mandated by current policy as stated in Section 2.1.1.

The interest rate changes yearly and therefore should be updated on a yearly basis.

3.1.2 COST TO ORDER

The results of the update and revision to the costs to order compared to the original costs are contained in Appendix A. The percent change in the cost to order by center and contract type is shown in Table 3-2.

Table 3-2. Percent Change in the Cost To Order

	SASPS 1	SASPS 2	SMALL ICP	SMALL DCMC	LARGE
DCSC	52.39%	58.53%	26.70%	43.67%	46.27%
DESC	43.94%	48.32%	27.90%	43.81%	45.30%
DGSC	52.59%	59.30%	25.64%	43.81%	45.78%
DISC	9.11%	25.24%	13.50%	44.40%	47.42%
DPSCC&T			-24.07%	12.77%	29.21%
DPSCMED			-4.98%	18.41%	20.31%

The increases associated with the cost to order are attributed to three factors. These factors are: (1) a change of the payment function to DFAS, (2) the availability of better cost estimating data for DCMC functions, and (3) an increase in wages.

The costs associated with the change of the payment function to DFAS appear to have risen dramatically from the previous

estimate. However, it must be noted that the original costs for payment were derived from "best guess estimates" of subject matter experts because time standards for payment functions were not available at that time. Nonetheless, this difference accounts for a large portion of the cost increase, particularly in the SASPS and small contract types.

The use of unit cost data more accurately reflects the cost of DCMC activities. A major portion of the increase for small DCMC administered contracts and large contracts is due to the change in the methodology for estimating costs of DCMC activities. The original estimates for DCMC functions were derived from an unpublished study performed in 1985.[11] This study was never fully embraced by DLA, but it was the best estimating tool for DCMC costs available at the time.

The factor having the least impact on increases to the cost to order is wages. Wages increased approximately 22 percent since the initial study was performed; however, since the depot and ICP costs are relatively small (compared to DCMC costs), the increase in wages does not drastically increase the cost to order.

Only small ICP administered contracts at DPSC (Medical) and DPSC (C&T) showed a decrease in the cost to order. These two areas were unaffected by the change of the payment function to DFAS or the new cost estimates for DCMC functions. The decrease in the cost to order at DPSC(C&T) is attributed to a decrease in the cost to perform an item manager review and the cost to perform a contract solicitation. The decrease in the cost to order at

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[11] "Draft Report. Development of DCAS Variable Cost to Order for DoD Instruction". Ibid.

DPSC(Medical) is due to a decrease in the cost of processing a PR.

3.1.3 COST TO TERMINATE

The cost to terminate a large PR dropped significantly and the cost to terminate a large contract rose significantly. This is due to changes in the methodology for calculating these costs as stated in Section 2.3.

The new cost for terminating a large PR better reflects the experience of personnel at the supply centers. The cost to terminate a large contract is based on the DCMAO unit cost data for contract termination for convenience. The original CTM study assumed that this cost was similar to the cost of a pre-award survey plus a cost in the FAR related to contract modification. Use of the DCMAO unit cost data better reflects the cost to terminate a large contract.

There is a large difference in the estimated cost to terminate a small DCMC administered contract and a small ICP administered contract. The administrative cost to terminate a small ICP administered contract is about $100. The administrative cost to terminate a small DCMC administered contract is about $1400. Due to this fact, the CTM should be modified to encompass the contract type of the small contract to be modified. Until this is accomplished, the cost to terminate a small ICP administered contract should be used since most small contracts are ICP administered.

SECTION 4

CONCLUSIONS

The validity of the Contract Termination Model is dependent on accurate termination and reprocurement contract cost data. Table 3-1 contains the revised cost factors for the Cost Data File for the CTM. These cost factors were revised using the latest policy guidance and the best available data for estimating costs.

SECTION 5
RECOMMENDATIONS

- We recommend that the Cost Data File of the CTM be replaced by each center to reflect the appropriate cost factors shown in Table 3-1 in order to ensure the validity of the Contract Termination model.

- We recommend the model be updated in the future to maintain the validity of the model.

  Recommended updates are:

  - Adjustments for interest rate and increases in salary every year.

  - As needed when DLA has a major change in the way they procure materiel or every 5 years. Whichever occurrence comes first.

- We recommend that the Contract Termination model be modified to consider the contract administration type for the cost to terminate a small contract.

APPENDIX A
REVISED COST TO ORDER

APPENDIX A

LIST OF TABLES

Table Legend

Old - Costs derived from original study, "Final Report Multiple Cost EOQ Study", Synergy, Inc., December, 1989

New - Costs derived from the update and revisions of this study.

SM - Small

ICP - ICP administered contracts

DCMC - DCMC administered contracts

MWDL - Missing Work Data List

QA - Quality Assurance

PR - Procurement Request

PP&M - Preservation, Packing, and Marking

DCSC	OLD SASPS I	NEW SASPS I	OLD SASPS II	NEW SASPS II	OLD ICP SM	NEW ICP SM	OLD DCMC SM	NEW DCMC SM	OLD Large	NEW Large
Item Manager Review	5.00	6.86	5.00	6.86	5.00	6.86	5.00	6.86	5.00	6.86
Working MDWL	1.00	1.77	1.00	1.77	1.00	1.77	1.00	1.77	1.00	1.77
QA Action	2.00	2.64	2.00	2.64	2.00	2.64	2.00	2.64	2.00	2.64
Technical Referral	2.00	2.25	6.00	7.66	9.00	11.57	9.00	11.57	12.00	14.28
Processing PR	1.00	0.61	1.00	1.13	1.00	0.97	1.00	0.97	4.00	5.34
Solicitation	10.00	6.56	3.00	3.23	11.00	8.29	11.00	8.73	25.00	25.16
Award	0.00	n/a	7.00	6.74	13.00	11.46	13.00	11.46	52.00	72.53
File Management	0.00	0.40	0.00	0.40	2.00	2.12	2.00	2.12	7.00	6.85
Production Follow-Up	2.00	1.30	2.00	1.30	8.00	5.64	8.00	5.64	10.00	8.26
Materiel Receiving	2.00	2.83	2.00	2.83	2.00	2.83	2.00	2.83	2.00	2.83
Materiel Inspection	3.00	3.02	3.00	3.02	3.00	3.02	3.00	3.02	3.00	3.02
PP&M	0.00	0.02	0.00	0.02	0.00	0.02	0.00	0.02	0.00	0.02
Stowage	1.00	1.62	1.00	1.62	1.00	1.62	1.00	1.62	1.00	1.62
Receipt Documentation	1.00	1.24	1.00	1.24	1.00	1.24	1.00	1.24	1.00	1.24
DFAS Payment	2.00	22.72	2.00	22.72	2.00	22.72	2.00	69.25	2.00	69.25
Preaward Survey			3.00	3.70	3.00	3.70	3.00	3.70	38.00	17.31
Contract Admin & QA			0.00	0.00	0.00	0.00	579.00	590.83	718.00	767.32
Source Inspection			0.00	0.00	0.00	0.00	161.00	95.17	161.00	95.17
Payment			0.00	0.00	0.00	0.00	18.00	6.84	18.00	6.84
Personnel Benefits	5.76	7.54	6.48	9.89	10.98	13.41	10.98	138.20	22.86	188.97
Leave Entitlements	11.16	14.61	12.55	19.15	21.27	25.98	21.27	267.72	44.28	366.06
Indirect Support	2.00	1.60	5.00	4.00	6.00	3.70	6.00	3.72	23.00	21.90
Direct Labor at ICP/Depot	32.00	31.13	36.00	40.46	61.00	60.04	61.00	60.47	127.00	152.41
Direct Labor Costs at DCMC			3.00	3.70	3.00	3.70	761.00	696.54	935.00	886.64
Direct Costs at DFAS		22.72		22.72		22.72		69.25		69.25
Labor Benefit Costs	16.92	22.15	19.03	29.04	32.25	39.39	32.25	405.92	67.14	555.03
Indirect	2.00	1.60	5.00	4.00	6.00	3.70	6.00	3.72	23.00	21.90
Total	50.92	77.59	63.03	99.93	102.25	129.55	860.25	1235.90	1152.14	1685.22

DESC	OLD SASPS I	NEW SASPS I	OLD SASPS II	NEW SASPS II	OLD ICP SM	NEW ICP SM	OLD DCMC SM	NEW DCMC SM	OLD Large	NEW Large
Item Manager Review	5.00	6.46	5.00	6.46	5.00	6.46	5.00	6.46	5.00	6.46
Working MDWL	1.00	3.74	1.00	3.74	1.00	3.74	1.00	3.74	1.00	3.74
QA Action	1.00	0.36	1.00	0.36	1.00	0.36	1.00	0.36	1.00	0.36
Technical Referral	0.00	0.00	5.00	5.93	11.00	14.37	11.00	14.37	10.00	13.29
Processing PR	1.00	0.90	1.00	1.06	1.00	0.90	1.00	0.90	3.00	3.37
Solicitation	11.00	9.73	4.00	3.92	7.00	6.12	7.00	6.32	21.00	26.58
Award	0.00	n/a	7.00	7.09	15.00	14.84	15.00	14.84	59.00	75.57
File Management	0.00	0.38	0.00	0.38	2.00	2.07	2.00	2.07	6.00	6.90
Production Follow-Up	3.00	1.37	3.00	1.37	8.00	3.72	8.00	3.72	21.00	13.44
Materiel Receiving	3.00	3.44	3.00	3.44	3.00	3.44	3.00	3.44	3.00	3.44
Materiel Inspection	3.00	3.25	3.00	3.25	3.00	3.25	3.00	3.25	3.00	3.25
PP&M	0.00	0.02	0.00	0.02	0.00	0.02	0.00	0.02	0.00	0.02
Stowage	2.00	1.88	2.00	1.88	2.00	1.88	2.00	1.88	2.00	1.88
Receipt Documentation	1.00	1.55	1.00	1.55	1.00	1.55	1.00	1.55	1.00	1.55
DFAS Payment	2.00	22.72	2.00	22.72	2.00	22.72	2.00	69.25	2.00	69.25
Preaward Survey			3.00	4.31	3.00	4.31	3.00	4.31	38.00	17.32
Contract Admin & QA			0.00	0.00	0.00	0.00	569.00	591.07	708.00	767.62
Source Inspection			0.00	0.00	0.00	0.00	168.00	95.17	168.00	95.17
Payment			0.00	0.00	0.00	0.00	21.00	6.84	21.00	6.84
Personnel Benefits	6.00	6.29	7.00	8.37	11.00	12.39	11.00	137.18	25.00	188.74
Leave Entitlements	12.00	12.18	13.00	16.22	22.00	24.00	22.00	265.73	48.00	365.62
Indirect Support	2.00	1.95	4.00	4.34	4.00	4.32	4.00	4.33	20.00	23.75
Direct Labor at ICP/Depot	33.00	33.15	38.00	40.44	62.00	62.73	62.00	62.93	138.00	159.84
Direct Labor Costs at DCMC			3.00	4.31	3.00	4.31	761.00	697.38	935.00	886.95
Direct Costs at DFAS		22.72		22.72		22.72		69.25		69.25
Labor Benefit Costs	18.00	18.47	20.00	24.60	33.00	36.38	33.00	402.91	73.00	554.37
Indirect	2.00	1.95	4.00	4.34	4.00	4.32	4.00	4.33	20.00	23.75
Total	53.00	76.29	65.00	96.41	102.00	130.46	860.00	1236.80	1166.00	1694.16

DGSC	OLD SASPS I	NEW SASPS I	OLD SASPS II	NEW SASPS II	OLD ICP SM	NEW ICP SM	OLD DCMC SM	NEW DCMC SM	OLD Large	NEW Large
Item Manager Review	5.00	7.34	5.00	7.34	5.00	7.34	5.00	7.34	5.00	7.34
Working MDWL	1.00	1.38	1.00	1.38	1.00	1.38	1.00	1.38	1.00	1.38
QA Action	1.00	0.81	1.00	0.81	1.00	0.81	1.00	0.81	1.00	0.81
Technical Referral	1.00	0.95	1.00	7.33	9.00	8.99	9.00	8.99	21.00	20.10
Processing PR	1.00	0.65	1.00	1.53	1.00	1.17	1.00	1.17	4.00	5.45
Solicitation	7.00	6.68	4.00	4.05	9.00	7.16	9.00	7.16	25.00	28.76
Award	0.00	n/a	10.00	8.98	13.00	14.78	13.00	14.78	58.00	77.51
File Management	0.00	0.39	0.00	0.39	1.00	2.48	1.00	2.48	7.00	9.07
Production Follow-Up	3.00	1.92	3.00	1.92	8.00	4.64	8.00	4.64	10.00	10.57
Materiel Receiving	3.00	2.97	3.00	2.97	3.00	2.97	3.00	2.97	3.00	2.97
Materiel Inspection	2.00	2.37	2.00	2.37	2.00	2.37	2.00	2.37	2.00	2.37
PP&M	0.00	0.02	0.00	0.02	0.00	0.02	0.00	0.02	0.00	0.02
Stowage	1.00	1.49	1.00	1.49	1.00	1.49	1.00	1.49	1.00	1.49
Receipt Documentation	1.00	0.91	1.00	0.91	1.00	0.91	1.00	0.91	1.00	0.91
DFAS Payment	2.00	22.72	2.00	22.72	2.00	22.72	2.00	69.25	2.00	69.25
Preaward Survey			3.00	2.25	3.00	2.25	3.00	2.25	38.00	17.34
Contract Admin & QA			0.00	0.00	0.00	0.00	579.00	591.82	718.00	768.61
Source Inspection			0.00	0.00	0.00	0.00	161.00	95.17	161.00	95.17
Payment			0.00	0.00	0.00	0.00	18.00	6.84	18.00	6.84
Personnel Benefits	5.00	5.66	6.00	8.51	10.00	11.21	10.00	136.10	26.00	190.85
Leave Entitlements	10.00	10.96	12.00	16.49	20.00	21.72	20.00	263.65	50.00	369.70
Indirect Support	2.00	1.44	4.00	4.10	4.00	3.69	4.00	3.69	22.00	23.43
Direct Labor at ICP/Depot	28.00	27.88	35.00	41.51	57.00	56.51	57.00	56.51	141.00	168.76
Direct Labor Costs at DCMC			3.00	2.25	3.00	2.25	761.00	696.08	935.00	887.96
Direct Costs at DFAS		22.72		22.72		22.72		69.25		69.25
Labor Benefit Costs	15.00	16.62	18.00	25.00	30.00	32.93	30.00	399.75	75.00	560.55
Indirect	2.00	1.44	4.00	4.10	4.00	3.69	4.00	3.69	22.00	23.43
Total	45.00	68.66	60.00	95.58	94.00	118.10	852.00	1225.28	1173.00	1709.94

DISC	OLD SASPS I	NEW SASPS I	OLD SASPS II	NEW SASPS II	OLD ICP SM	NEW ICP SM	OLD DCMC SM	NEW DCMC SM	OLD Large	NEW Large
Item Manager Review	5.00	5.63	5.00	5.63	5.00	5.63	5.00	5.63	5.00	5.63
Working MDWL	3.00	5.61	3.00	5.61	3.00	5.61	3.00	5.61	3.00	5.61
QA Action	2.00	1.68	2.00	1.68	2.00	1.68	2.00	1.68	2.00	1.68
Technical Referral	1.00	0.74	6.00	6.50	9.00	9.09	9.00	9.09	20.00	20.60
Processing PR	1.00	1.01	1.00	1.34	1.00	0.72	1.00	0.72	3.00	3.61
Solicitation	12.00	9.45	7.00	5.37	10.00	6.65	10.00	6.65	29.00	42.75
Award	0.00	n/a	10.00	10.97	15.00	13.97	15.00	13.97	62.00	87.69
File Management	0.00	0.44	0.00	0.44	2.00	2.61	2.00	2.61	7.00	9.15
Production Follow-Up	2.00	2.10	2.00	2.10	5.00	5.48	5.00	5.48	19.00	21.31
Materiel Receiving	3.00	3.57	3.00	3.57	3.00	3.57	3.00	3.57	3.00	3.57
Materiel Inspection	4.00	4.17	4.00	4.17	4.00	4.17	4.00	4.17	4.00	4.17
PP&M	0.00	0.03	0.00	0.03	0.00	0.03	0.00	0.03	0.00	0.03
Stowage	2.00	2.13	2.00	2.13	2.00	2.13	2.00	2.13	2.00	2.13
Receipt Documentation	1.00	1.70	1.00	1.70	1.00	1.70	1.00	1.70	1.00	1.70
DFAS Payment	3.00	3.18	3.00	3.18	3.00	3.18	3.00	69.25	3.00	69.25
Preaward Survey			3.00	8.29	3.00	8.29	3.00	8.29	38.00	17.37
Contract Admin & QA			0.00	0.00	0.00	0.00	570.00	593.06	709.00	770.20
Source Inspection			0.00	0.00	0.00	0.00	164.00	95.17	164.00	95.17
Payment			0.00	0.00	0.00	0.00	25.00	6.84	25.00	6.84
Personnel Benefits	7.00	8.31	9.00	12.13	11.45	14.26	11.45	139.37	27.00	199.28
Leave Entitlements	14.00	16.09	17.00	23.51	22.18	27.62	22.18	269.99	52.30	386.03
Indirect Support	2.00	1.80	4.00	4.34	4.00	3.48	4.00	3.48	20.00	22.69
Direct Labor at ICP/Depot	39.00	38.27	49.00	51.25	65.00	63.05	65.00	63.05	163.00	209.64
Direct Labor Costs at DCMC			3.00	8.29	3.00	8.29	762.00	703.36	936.00	889.58
Direct Costs at DFAS		3.18		3.18		3.18		69.25		69.25
Labor Benefit Costs	21.00	24.40	26.00	35.64	33.63	41.88	33.63	409.36	86.00	585.31
Indirect	2.00	1.80	4.00	4.34	4.00	3.48	4.00	3.48	20.00	22.69
Total	62.00	67.65	82.00	102.70	105.63	119.89	864.63	1248.50	1205.00	1776.47

DPSCC&T	OLD SASPS I	NEW SASPS I	OLD SASPS II	NEW SASPS II	OLD ICP SM	NEW ICP SM	OLD DCMC SM	NEW DCMC SM	OLD Large	NEW Large
Item Manager Review					13.00	2.77	13.00	2.77	13.00	2.77
Working MDWL					10.00	10.36	10.00	10.36	10.00	10.36
QA Action					5.00	1.22	5.00	1.22	5.00	1.22
Technical Referral					9.00	6.57	9.00	6.57	14.00	15.50
Processing PR					1.00	1.06	1.00	1.06	5.00	6.51
Solicitation					27.00	18.02	27.00	18.83	50.00	67.12
Award					14.00	13.76	14.00	13.76	64.00	132.50
File Management					1.00	3.66	1.00	3.66	2.00	12.50
Production Follow-Up					24.00	5.15	24.00	5.15	24.00	5.20
Materiel Receiving					20.00	22.97	20.00	22.97	20.00	22.97
Materiel Inspection					18.00	21.11	18.00	21.11	18.00	21.11
PP&M					0.00	0.21	0.00	0.21	0.00	0.21
Stowage					10.00	11.33	10.00	11.33	10.00	11.33
Receipt Documentation					8.00	9.49	8.00	9.49	8.00	9.49
DFAS Payment					14.00	16.88	14.00	69.25	14.00	69.25
Preaward Survey					3.00	0.39	3.00	0.39	38.00	16.80
Contract Admin & QA					0.00	0.00	534.00	573.22	673.00	744.45
Source Inspection					0.00	0.00	200.00	95.17	200.00	95.17
Payment					0.00	0.00	130.00	6.84	130.00	6.84
Personnel Benefits					31.00	22.63	31.00	144.31	46.00	213.53
Leave Entitlements					61.00	43.83	62.00	279.56	90.00	413.64
Indirect Support					16.00	4.99	16.00	5.03	41.00	27.37
Direct Labor at ICP/Depot					174.00	127.68	174.00	128.49	257.00	318.79
Direct Labor Costs at DCMC					3.00	0.39	867.00	675.62	1041.00	863.26
Direct Costs at DFAS						16.88		69.25		69.25
Labor Benefit Costs					92.00	66.46	92.00	423.88	136.00	627.16
Indirect					16.00	4.99	16.00	5.03	41.00	27.37
Total					285.00	216.40	1149.00	1302.26	1475.00	1905.83

DPSCMED	OLD SASPS I	NEW SASPS I	OLD SASPS II	NEW SASPS II	OLD ICP SM	NEW ICP SM	OLD DCMC SM	NEW DCMC SM	OLD Large	NEW Large
Item Manager Review					7.00	6.87	7.00	6.87	7.00	6.87
Working MDWL					1.00	0.72	1.00	0.72	1.00	0.72
QA Action					1.00	3.63	1.00	3.63	1.00	3.63
Technical Referral					9.00	7.22	9.00	7.22	18.00	14.44
Processing PR					14.00	1.10	14.00	1.10	28.00	4.59
Solicitation					1.00	8.47	1.00	8.90	3.00	21.36
Award					11.00	11.05	11.00	11.05	60.00	84.13
File Management					1.00	2.61	1.00	2.61	4.00	8.93
Production Follow-Up					3.00	1.20	3.00	1.20	12.00	7.00
Materiel Receiving					4.00	4.31	4.00	4.31	4.00	4.31
Materiel Inspection					3.00	4.00	3.00	4.00	3.00	4.00
PP&M					0.00	0.03	0.00	0.03	0.00	0.03
Stowage					2.00	2.17	2.00	2.17	2.00	2.17
Receipt Documentation					2.00	2.02	2.00	2.02	2.00	2.02
DFAS Payment					3.00	3.18	3.00	69.25	3.00	69.25
Preaward Survey					3.00	0.18	3.00	0.18	38.00	13.43
Contract Admin & QA					0.00	0.00	574.00	458.32	713.00	595.23
Source Inspection					0.00	0.00	160.00	95.17	160.00	95.17
Payment					0.00	0.00	25.00	6.84	25.00	6.84
Personnel Benefits					11.00	12.75	11.00	113.68	27.00	160.22
Leave Entitlements					22.00	24.70	22.00	220.23	52.00	310.37
Indirect Support					7.00	3.56	7.00	3.58	32.00	21.85
Direct Labor at ICP/Depot					62.00	55.40	62.00	55.83	148.00	164.19
Direct Labor Costs at DCMC					3.00	0.18	762.00	560.51	936.00	710.67
Direct Costs at DFAS						3.18		69.25		69.25
Labor Benefit Costs					33.00	37.45	33.00	333.91	78.00	470.59
Indirect					7.00	3.56	7.00	3.58	32.00	21.85
Total					105.00	99.77	864.00	1023.07	1194.00	1436.54

ABSTRACT

DLA-94-P40034. Update to Contracting Cost Factors used in the Contract Termination Model.

This is a study to update and revise the cost factors contained in the Cost Data File of the Contract Termination Model (CTM). The CTM is used by DLA Supply Centers to evaluate whether or not existing contractual actions are still cost effective. The validity of the Contract Termination Model is dependent on accurate inventory, reprocurement, and termination cost data. The cost factors in the Cost Data File of the Contract Termination Model were revised using the latest policy guidance and the best available data for estimating costs. The Cost Data File should be replaced by each center to reflect the updated cost factors derived from this study to ensure the validity of the CTM.

KEY WORDS: Procurement, Contract Termination, Inventory

REPORT DOCUMENTATION PAGE

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1. AGENCY USE ONLY *(Leave blank)*	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	July 1994	Final

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Cathy J. Arebalo

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Defense Logistics Agency
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11. SUPPLEMENTARY NOTES

12a. DISTRIBUTION/AVAILABILITY STATEMENT
Public Release; Unlimited Distribution

12b. DISTRIBUTION CODE

13. ABSTRACT *(Maximum 200 words)*

This is a study to update and revise the cost factors contained in the Cost Data File of the Contract Termination Model (CTM). The CTM is used by DLA Supply Centers to evaluate whether or not existing contractual actions are still cost effective. The validity of the Contract Termination Model is dependent on accurate inventory, reprocurement, and termination cost data. The cost factors in the Cost Data File of the Contract Termination Model were revised using the latest policy guidance and the best available data for estimating costs. The Cost Data File should be replaced by each center to reflect the updated cost factors derived from this study to ensure the validity of the CTM.

14. SUBJECT TERMS
Procurement, Contract Termination, Inventory

15. NUMBER OF PAGES

16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
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